Jaime Andrés Noreña Cordoba

Backend Developer · C · Python · Java

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PROFILE

Systems Engineering student (8th semester) focused on **backend development**. I enjoy working close to the system in **C** (memory management, algorithms, rendering) and building production-style services: **ETL pipelines, REST APIs, authentication and CI/CD**. Looking for a junior backend role or internship.

EDUCATION

Universidad del Valle Expected graduation: 2027

B.S. in Systems Engineering · Currently in 8th semester · GPA 4.1 / 5.0 Cali, Colombia

Relevant coursework: Algorithm Analysis & Design, Functional & Concurrent Programming, Discrete Mathematics, Software Development, Computer Infrastructure, Artificial Intelligence, Cybersecurity.

PROJECTS

Labor-Market BI Platform (GEIH_BI) | Python, pandas, MongoDB, Streamlit, Docker, pytest 2026

- Built an **ETL pipeline** over 4 years of raw national survey data from DANE (**~3.4M person-month records**), handling nested archives, broken file encodings and inconsistent CSV formats.
- Designed a **star-schema data warehouse** in MongoDB (fact table, 10 dimensions, pre-aggregated monthly cube) with idempotent, logged loads, plus a **role-based dashboard**. Covered by **82 automated tests**.

Fitness Tracking App (UVfit) | React Native, TypeScript, FastAPI, SQLAlchemy, Azure 2025

- Built most of a cross-platform mobile app for tracking training, nutrition and sleep, with **Android Health Connect** sync and offline storage in SQLite.
- Developed the **FastAPI backend** (user management, bcrypt hashing, **JWT authentication**) and deployed it to **Azure App Service** through a **GitHub Actions CI/CD** pipeline.

Raycasting 3D Engine | C, raylib 2024

- Wrote a Wolfenstein-style 3D renderer from scratch in C: **grid ray traversal**, fisheye-corrected projection, **texture mapping**, collision detection and frame-rate-independent movement.

Formal Grammar Interpreter (Gramable) | C 2024

- Tests word membership and generates languages through **bounded recursive derivation**. Built on hand-written **dynamic string and set libraries** with manual memory management.

Real-time Pixel Canvas (UVplace) | Python, Flask, WebSockets, SQLite 2025

- Built the backend and real-time layer of a multiplayer, r/place-style canvas: pixel updates are saved and **broadcast to all clients over WebSockets**, with session-based authentication.

Event Ticketing Microservices (VivaEventos) | Java, Spring Boot 2026

- Built the **event service** (REST API, DTOs, domain exceptions, Postman test collection) in a 7-person team's **microservices architecture** with an API gateway and service discovery.

SKILLS

Languages	C, C++, Python, Java, TypeScript / JavaScript, SQL
Backend & Data	FastAPI, Flask, Spring Boot, REST APIs, WebSockets, MongoDB, PostgreSQL, SQLite
Web & Mobile	React Native, Expo, HTML & CSS, Astro, Tailwind CSS
Tools	Linux, Git / GitHub, GitHub Actions, Docker, Make, pytest, pandas, Azure
Spoken languages	Spanish (native), English (B2)